

"Express Mail" mailing label number EV 339 772 437 U.S.

Date of Deposit: January 29, 2004

Our Case No.11706/4

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
APPLICATION FOR UNITED STATES LETTERS PATENT

INVENTOR: Danny Yi-Hung LIN, M.D.

TITLE: YOGA BALANCE TRAINER

ATTORNEY: Anastasia Heffner  
BRINKS HOFER GILSON & LIONE  
P.O. BOX 10395  
CHICAGO, ILLINOIS 60610  
(312) 321-4200

## **YOGA BALANCE TRAINER**

### **BACKGROUND OF THE INVENTION**

#### **1. Field of the Invention**

5 The invention relates to an exerciser, more particularly to a yoga balance trainer.

#### **2. Description of the Related Art**

10 There are various kinds of exercising equipment available in the market today, such as running machines, stationary bikes, rowing machines, etc. However, exercisers that can provide balance training and soft exercises at the same time are very rare. Furthermore, the operations of the aforementioned exercising equipment are monotonous such that the functionality of the exercising equipment and the effect of the exercises are limited.

### **SUMMARY OF THE INVENTION**

20 Therefore, the object of the present invention is to provide a yoga balance trainer that can provide balance training and soft exercises at the same time and that permits multiple forms of exercise.

25 According to this invention, a yoga balance trainer comprises a main frame and a seat assembly. The main frame includes a bottom board, a top board opposite to the bottom board, and a spring unit connected between the bottom and top boards so as to permit movement of the top board relative to the bottom board. The seat assembly is mounted on the top board, and includes a

supporting leg frame secured to the top board, and a seat secured to the supporting leg frame. When the user sits on the seat assembly and moves to and fro, the top board moves relative to the bottom board.

5     **BRIEF DESCRIPTION OF THE DRAWINGS**

Other features and advantages of the present invention will become apparent in the following detailed description of the preferred embodiment with reference to the accompanying drawings, of which:

10     Figure 1 is a partly exploded perspective view of the preferred embodiment of a yoga balance trainer according to the present invention;

Figure 2 is a perspective view of the preferred embodiment in an assembled state;

15     Figure 3 is a partly sectional view of the preferred embodiment;

Figure 4 is a schematic bottom view of the preferred embodiment; and

20     Figures 5 to 11 illustrate a series of exercises that can be performed using the preferred embodiment.

**DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT**

Referring to Figures 1 to 4, the preferred embodiment of a yoga balance trainer according to the present invention is shown to comprise a main frame 10, a seat assembly 20, a base support 30, and an auxiliary holding unit 40.

The main frame 10 includes a rectangular hard bottom

board 11, a rectangular hard top board 12 opposite to the bottom board 11, and a spring unit 13 connected between the bottom and top boards 11, 12. In other embodiments, the bottom and top boards 11, 12 can be circular, oval or have other geometric shapes. The spring unit 13, as shown in Figure 3, includes a plurality of spring members 131, and a plurality of sponge bodies 132 inserted among the spring members 131. The design of the spring unit 13 permits flexible movement of the top board 12 relative to the bottom board 11.

The seat assembly 20 is mounted on the top board 12 of the main frame 10, and includes an inverted-V supporting leg frame 21, a seat 22, a foot support frame 23, and a handle unit. The supporting leg frame 21 is secured to the top board 12 of the main frame 10, and includes a top connecting bar 210, a pair of parallel front support legs 212, and a pair of parallel rear support legs 211 opposite to the front support legs 212. The front support legs 212 extend upwardly and rearwardly from the top board 12, and have opposite top and bottom ends 2121, 2122 (see Figure 2). The bottom ends 2122 of the front support legs 212 are connected to the top board 12 proximate to a front end 122 of the top board 12. The rear support legs 211 extend upwardly and frontwardly from the top board 12, and have opposite top and bottom ends 2111, 2112 (see Figure 2). A pair of screws 213 pass through the bottom ends 2112 of the

rear support legs 211, and engage the top board 12 so as to secure the rear support legs 211 on the top board 12 of the main frame 10 proximate to a rear end 121 of the top board 12. The top connecting bar 210 is connected to the top ends 2121, 2111 of the front and rear support legs 212, 211.

The seat 22 is secured to the top connecting bar 210 of the supporting leg frame 21.

The foot support frame 23 is connected to the supporting leg frame 21 for supporting the feet of a user during exercise, and includes a connecting plate 231 and a foot support 232. The connecting plate 231 is connected between the front support legs 212 on the top board 12. The foot support 232 is connected to and extends upwardly and forwardly from the connecting plate 231, and is disposed between the front support legs 212. Three screws 233 pass through the connecting plate 231 and the front support legs 212, and engage the top board 12 so as to secure the front support legs 212 and the foot support frame 23 on the top board 12 of the main frame 10.

The handle unit is connected to a top portion of the supporting leg frame 21, and includes two handle members 24 disposed at two opposite sides of the seat 22.

The base support 30 is connected to the main frame 10, and includes four spaced-apart positioning tubes 31 and four first fastening units. The positioning tubes

31 are screwed to a bottom surface of the bottom board 11, as best shown in Figure 4. In this embodiment, each of the first fastening units is formed as a loop fastener 32 (see Figure 1) welded to a top surface of a respective one of the positioning tubes 31.

The auxiliary holding unit 40 is connected to the base support 30, and includes four holding members 41. Each of the holding members 41 can be made of a resilient and retractable material, or a woven strap which is not resilient but has an adjustable length. Each holding member 41 has a holding end provided with a handgrip 43, and a connecting end opposite to the handgrip 43 and provided with a second fastening unit. In this embodiment, the second fastening unit is a hook fastener 42 that engages detachably the loop fastener 32 on a respective one of the positioning tubes 31 of the base support 30 so as to retain respectively the holding members 41 on the positioning tubes 31.

After assembly, the top board 12 is supported by the spring unit 13, as best shown in Figure 3. Under normal circumstances, the top board 12 is substantially parallel to the bottom board 11.

Referring to Figures 5 and 6, the user sits on the seat 22 of the seat assembly 20 with his feet disposed on the foot support 232 and his hands gripping the handles 24. The auxiliary holding unit 40 is not required in this exercise. Because the spring unit 13 is connected

between the bottom and top boards 11, 12, the user can proceed with the exercise by moving his body to and fro so that the top board 12 swings reciprocatingly with different inclination angles relative to the bottom board 11. As such, the user's body can be moved to any desired angle and in any direction. The purposes of training for self-balancing and exercising the muscles of the waist, stomach, legs, and other body parts of the user can therefore be achieved.

Referring to Figures 7 and 8, in this exercise, two holding members 41 (only one is visible) are fastened respectively to two of the positioning tubes 31 (only one is visible) of the base support 30 disposed in front of the user. Then, the user sits on the seat 22 of the seat assembly 20 with both hands grasping the respective handgrips 43 of the holding members 41 and with his feet disposed on the foot support 232. The user begins the exercise by moving his body and simultaneously pulling the holding members 41 to effect training of the muscles of the user's forearms. Furthermore, through the movements of the user's body to different inclination angles relative to the bottom board 11, balance training and health fitness can be achieved.

Referring to Figure 9, in this exercise, the holding members 41 (see Figure 7) are removed, and the user sits on the seat 22 of the seat assembly 20 with his feet supported on the foot support 232 but without holding

the handles 24. Then, the user's body is moved to and  
fro, inclining at different angles and in different  
directions, thereby achieving the purpose of training  
the muscles of the waist, stomach, legs, and other body  
5 parts of the user.

Referring to Figures 10 and 11, the holding members  
41 (see Figure 7) are not required in this exercise.  
The user similarly sits on the seat 22 of the seat assembly  
20 with both hands gripping the handles 24 and with his  
10 feet supported on the foot support 232. Through a  
continuous, reciprocal movement of the user's body to  
left and right sides of the top board 12, and through  
the resilient movements of the main frame 10, balance  
training and exercising of the muscles of the waist,  
15 stomach, legs, and other body parts of the user can be  
achieved.

While the present invention has been described in  
connection with what is considered the most practical  
and preferred embodiment, it is understood that this  
20 invention is not limited to the disclosed embodiment  
but is intended to cover various arrangements included  
within the spirit and scope of the broadest  
interpretation so as to encompass all such modifications  
and equivalent arrangements.